

comprises a compound fabric “woven as to have substantially low friction fibers exposed at the outer surface 16...[which] does not bond readily with the material of the body 14....” Accordingly, an adhesive matrix impregnates body 14 and each lamination 12 to bond laminations 12 to body 14. Notably, Stanley et al. do not describe nor suggest impregnating bushing 10 with a polyimide resin that includes polytetrafluoroethylene powder, but rather describe that the fabric is “so woven as to have substantially the low friction fibers exposed at the outer surface 16 to minimize friction....”

McCloskey describes a bearing liner formed of a mixture of thermosetting blended and unblended resins and particles of a self-lubricating, heat resistant plastic material, such as Teflon. A resin material is deposited to a backing material by painting, spraying, or knife coating. In one embodiment, the resin material is a mixture of polybutadien resin and Teflon (polytetrafluoroethylene) powder. The backing material may be fabricated from a woven fabric formed of a plurality of threads of materials including Dacron, Nomex, fiberglass, or aluminum foil. The composite liner is then placed within a high pressure press and heated while under pressure. Slip sheets of pure Teflon are then positioned against the uncured composite liner, and additional uncured resin layers are applied to the liner material. The liner material is then positioned adjacent a spherical bearing, and the bearing is then contracted under pressure to form the assembled bearing.

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to modify Stanley et al. according to the teachings of McCloskey. More specifically, it is respectfully submitted that a prima facie case of obviousness has not been established. As explained by the Federal Circuit, “to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant.” In re Kotzab, 54 USPQ2d 1308, 1316 (Fed. Cir. 2000). MPEP 2143.01.

Moreover, the Federal Circuit has determined that:

[I]t is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that “[o]ne

cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.”

In re Fitch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Further, under Section 103, "it is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." In re Wesslau, 147 USPQ 391, 393 (CCPA 1965). Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicants' disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion nor motivation to combine the cited art, nor any reasonable expectation of success has been shown.

Although it is asserted within the Office Action that Stanley et al. teach the present invention except for disclosing the polyimide resin comprises Teflon, and that McCloskey discloses impregnating a polyimide resin matrix, no motivation nor suggestion to combine the cited art has been shown. Since there is no teaching nor suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection of Claims 11, 13-17, 19, and 20 be withdrawn.

Furthermore, Applicants respectfully submit that no motivation for the combination can be found within Stanley et al. and McCloskey, as Stanley et al. and McCloskey teach away from each other. Stanley et al. describe a composite article that is formed of a plurality of layers that are woven with PTFE fibers. Specifically, Stanley et al. do not describe nor suggest impregnating a bushing with a polyimide resin that includes polytetrafluoroethylene powder, but rather Stanley et al. describe that the fabric is "so woven as to have substantially the low friction fibers exposed at the outer surface 16 to minimize friction...." Furthermore, Stanley et al. describe that the bushing is impregnated by a resin for the sole purpose of bonding the bushing together.

In contrast, McCloskey forms a "low sliding friction surface" by depositing a resin material including Teflon (polytetrafluoroethylene) powder against a backing material, and if

necessary, positioning slip sheets of pure Teflon against the uncured composite liner, before applying additional and additional resin layers to the liner material. Specifically, at column 5, lines 35-40, McCloskey describes that the superior wear characteristics exhibited by the bearing are as a result of the “chemical bonding or adhesion which takes place between the polytetrafluoroethylene particles and the surrounding cured resin matrix in the composite bearing liner.” Moreover, in contrast to Stanley et al., at column 5 lines 46-49, McCloskey recites that “[t]his is contrasted with prior art bearing embodiments which, at most employ a resin matrix to merely physically entrap polytetrafluoroethylene particles.”

If art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. More specifically, Applicants respectfully submit that McCloskey teaches away from Stanley, and as such, there is no suggestion or motivation to combine Stanley et al. with McCloskey.

Further, and to the extent understood, no combination of Stanley et al. and McCloskey, describes or suggests the claimed combination, and as such, the presently pending claims are patentably distinguishable from the cited combination. Specifically, Claim 11 recites a method for manufacturing a bearing element comprising the steps of “forming a plurality of layers from a combination of a first material and a second material, wherein a first of said layers formed from a plurality of materials comprising at least one of polytetrafluoroethylene fibers, glass fibers, carbon fibers, and combinations thereof, and wherein a second of said layers is formed against the first layer and is formed from a single material...impregnating each of the bearing element plurality of layers with a polyimide resin comprising polytetrafluoroethylene powder.”

The combination of Stanley et al. and McCloskey does not describe nor suggest a method for manufacturing a bearing element including the steps of forming a plurality of layers from a combination of a first material and a second material, wherein a first of said layers formed from a plurality of materials comprising at least one of polytetrafluoroethylene fibers, glass fibers, carbon fibers, and combinations thereof, and wherein a second of said layers is formed against the first layer and is formed from a single material, in combination with the step of impregnating each of the bearing element plurality of layers with a polyimide

resin comprising polytetrafluoroethylene powder. No combination of Stanley et al. nor McCloskey describes or suggests impregnating a bearing element that is fabricated from a plurality of layers that are woven with at least one of polytetrafluoroethylene fibers, glass fibers, carbon fibers, and combinations thereof, with a resin including polytetrafluoroethylene powder. Accordingly, for at least the reasons set forth above, Claim 11 is submitted to be patentable over Stanley et al. in view of McCloskey.

Claims 13-17, 19, and 20 depend from independent Claim 11. When the recitations of Claims 13-17, 19, and 20 are considered in combination with the recitations of Claim 11, Applicants submit that dependent Claim 13-17, 19, and 20 likewise are patentable over Stanley et al. in view of McCloskey.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 11, 13-17, 19, and 20 be withdrawn.

The rejection of Claim 18 under 35 U.S.C. § 103 as being unpatentable over Stanley et al. in view of McCloskey and further in view of Viola et al. (U.S. Pat. No. 3,873,168) is respectfully traversed.

Stanley et al. and McCloskey are described above. Viola et al. describe a washer 10 including a pair of outer bearing portions 12 and a body 14. In the preferred embodiment, body 14 is fabricated from a layer of woven glass and a pair of layers of woven graphite. Bearing portions 12 are bonded to each side of body 14 by a resin that is impregnated in each portion 12 and body 14. In an alternative embodiment, carbon fibers replace the graphite fibers. In one embodiment, to facilitate enhancing the life and anti-friction characteristics of the outer surface of washer 10, a coating 18 is applied to bearing portion 12.

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to modify Stanley et al. according to the teachings of McCloskey, in light of the teachings of Viola et al. More specifically, it is respectfully submitted that a prima facie case of obviousness has not been established. As explained by the Federal Circuit, "to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation,

suggestion or teaching of the desirability of making the specific combination that was made by the applicant." In re Kotzab, 54 USPQ2d 1308, 1316 (Fed. Cir. 2000). MPEP 2143.01.

Moreover, the Federal Circuit has determined that:

[I]t is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

In re Fitch, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992). Further, under Section 103, "it is impermissible . . . to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." In re Wesslau, 147 USPQ 391, 393 (CCPA 1965). Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicants' disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion nor motivation to combine the cited art, nor any reasonable expectation of success has been shown. Accordingly, since there is no teaching nor suggestion in the cited art for the claimed combination, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection of Claim 18 be withdrawn.

Furthermore, Applicants respectfully submit that the cited art teach away from each other. Stanley et al. describe a composite article that is formed of a plurality of layers that are woven with PTFE fibers. Specifically, Stanley et al. do not describe nor suggest impregnating bushing with a polyimide resin that includes polytetrafluoroethylene powder, but rather describe that the fabric is "so woven as to have substantially the low friction fibers exposed at the outer surface 16 to minimize friction...." Furthermore, Stanley et al. describe that the bushing is impregnated by a resin for the sole purpose of bonding the bushing together.

In contrast, McCloskey forms a "low sliding friction surface" by depositing a resin material including Teflon (polytetrafluoroethylene) powder against a backing material, and if

necessary, positioning slip sheets of pure Teflon against the uncured composite liner, before applying additional and additional resin layers to the liner material. Specifically, at column 5, lines 35-40, McCloskey describes that the superior wear characteristics exhibited by the bearing are as a result of the “chemical bonding or adhesion which takes place between the polytetrafluoroethylene particles and the surrounding cured resin matrix in the composite bearing liner.” Moreover, at column 5 lines 46-49, McCloskey recites that “[t]his is contrasted with prior art bearing embodiments which, at most employ a resin matrix to merely physically entrap polytetrafluoroethylene particles.”

If art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. More specifically, because Applicants respectfully submit that McCloskey teaches away from Stanley, and as such, there is no suggestion or motivation to combine Stanley et al. with McCloskey.

Further, and to the extent understood, no combination of Stanley et al., McCloskey, nor Viola et al., describes or suggests the claimed combination, and as such, the presently pending claims are patentably distinguishable from the cited combination. Specifically, Claim 18 depends from Claim 11, which recites a method for manufacturing a bearing element comprising the steps of “forming a plurality of layers from a combination of a first material and a second material, wherein a first of said layers formed from a plurality of materials comprising at least one of polytetrafluoroethylene fibers, glass fibers, carbon fibers, and combinations thereof, and wherein a second of said layers is formed against the first layer and is formed from a single material...impregnating each of the bearing element plurality of layers with a polyimide resin comprising polytetrafluoroethylene powder.”

The combination of Stanley et al., McCloskey, and Viola et al. does not describe nor suggest a method for manufacturing a bearing element including the steps of forming a plurality of layers from a combination of a first material and a second material, wherein a first of said layers formed from a plurality of materials comprising at least one of polytetrafluoroethylene fibers, glass fibers, carbon fibers, and combinations thereof, and wherein a second of said layers is formed against the first layer and is formed from a single material, in combination with the step of impregnating each of the bearing element plurality

of layers with a polyimide resin comprising polytetrafluoroethylene powder. None of Stanley et al., McCloskey, nor Viola et al., considered in combination or alone, describe or suggest impregnating a bearing element that is fabricated from a plurality of layers that are woven with at least one of polytetrafluoroethylene fibers, glass fibers, carbon fibers, and combinations thereof, with a resin including polytetrafluoroethylene powder. Accordingly, for at least the reasons set forth above, Claim 11 is submitted to be patentable over Stanley et al. in view of McCloskey, and in further view of Viola et al.

Claim 18 depends from independent Claim 11. When the recitations of Claim 18 are considered in combination with the recitations of Claim 11, Applicants submit that dependent Claim 18 likewise is patentable over Stanley et al. in view of McCloskey.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claim 18 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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